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Please find below and/or attached an Office communication concerning this application or proceeding.

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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/565,203
Filing Date: May 22, 2006
Appellant(s): FREMEREY, JOHAN K.

Joseph W. Berenato
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed **03/23/2010** appealing from the Office action mailed **11/06/2009**.

(1) Real Party in Interest

The examiner has no comment on the statement, or lack of statement, identifying by name the real party in interest in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The following is a list of claims that are rejected and pending in the application:

Claims 1 and **3-13**, **claim 2** has been cancelled.

(4) Status of Amendments After Final

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

(5) Summary of Claimed Subject Matter

The examiner has no comment on the summary of claimed subject matter contained in the brief.

(6) Grounds of Rejection to be Reviewed on Appeal

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except for the grounds of rejection (if any) listed under the subheading "WITHDRAWN

REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW GROUNDS OF REJECTION."

(6) Grounds of Rejection to be Reviewed on Appeal

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except for the grounds of rejection (if any) listed under the subheading "WITHDRAWN REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW GROUNDS OF REJECTION."

(7) Claims Appendix

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant's brief.

(8) Evidence Relied Upon

5,302,874	Pinkerton	4-1994
6,250,577	Koenig	6-2001

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) The invention was patented or described in a printed publication in this or a foreign country, in public use, or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. **Claims 1, 3-6** and **8-12** are rejected under **35 U.S.C. 102(b)** as being anticipated by **Pinkerton US 5,302,874 A [Pinkerton]**.

2. Regarding **claim 1**, at **[figs. 1-8] Pinkerton** teaches an annular permanent magnet divided in a circumferential direction thereof at at least one location **[38/40, fig. 7]** to form a radially extending slit **[between each set of segments of elements 38 and 40]**, the radially extending slit defined by opposing faces **[N and S, fig. 7]** of the magnet **[38/40]**, and an annular binding band **[12]** surrounding, engaged with **[fig. 5]**, and exerting a preloading force on the annular permanent magnet **[38/40]**, wherein the opposing faces of the magnet are not in contact with each other **[fig. 7]**.

3. Regarding **claim 8**, at **[figs. 1-8] Pinkerton** teaches a hub **[16]**, an annular magnet **[38/40]** mounted on **[not directly, based on the meaning: an object to which another is affixed or on which another is placed for accessibility, display, or use]** the hub **[16, fig. 5]** and divided in a circumferential direction in at least one location to form a radially extending slit **[between segments of elements 38 and 40]** defined by opposing faces of the magnet **[38/40]**; and an annular binding band **[12]** surrounding and engaged with the annular magnet **[38/40]**, the annular binding band exerting an inwardly directed radial force preloading the annular magnet **[38, 40]**, wherein the opposing faces of the annular magnet **[38, 40]** are not in contact with each other **[fig. 7]**.

4. Regarding **claims 3 and 9**, wherein the permanent magnet **[38 and 40]** is divided in a circumferential direction thereof at multiple locations **[fig. 7]** to form multiple radially extend slits **[between segments of elements 38 and 40]** and a plurality of spaced apart segments **[N**

and S] and the plurality of the spaced apart segments **[N and S]** are not in contact with adjacent segments **[segments N and S are spaced apart]**.

5. Regarding **claims 4 and 10**, wherein the locations are distributed regularly around a periphery of the permanent magnet **[38 and 40]**.

6. Regarding **claims 5 and 11**, wherein the bearing element comprises multiple permanent magnets **[38 and 40]** arranged concentrically with one another, all of which are divided at least one location **[fig. 7]** and spaced apart there.

7. Regarding **claims 6 and 12**, wherein the radially extending slit **[between segments of elements 38 and 40]** of one of the multiple permanent magnets **[38 and 40]** is **offset [offset could mean an agent, element, or thing that balances, counteracts, or compensates for something else]** from the radially extending slit of another one of the multiple permanent magnets **[38 and 40]** in the circumferential direction **[fig. 7]**.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. **Claims 7** and **13** are rejected under **35 U.S.C. 103(a)** as being unpatentable over **Pinkerton** as applied to **claim 1** above, in view of **Koenig US 6,250,577 B1 [Koenig]**.

9. Regarding **Claim 7**, **Pinkerton** discloses the claimed invention except for that the annular binding band is made from a carbon-fiber material. Koenig teaches that it is known to use the carbon-fiber material as an insert or as binding band as set forth at **[c. 2, l. 30-37 and c. 3,**

l. 6-12]. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify **Pinkerton's** bearing composed of a carbon-fiber material insert or binding as taught by **Koenig** since carbon-fiber materials are known to be used as bearing surface as disclosed in the **[abstract].** Moreover, it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

(10) Response to Argument

Appellant's arguments filed **03/23/2010** have been fully considered but they are not persuasive.

1. Claims Rejections Under **35 U.S.C. § 102(b)** – as to **claims 1** and **8**, specifically appellant argues, "… Pinkerton, however, fails to disclose an annular binding band or a binding band engaged with an annular magnet, and makes no reference to any component exerting a preloading force on an annular magnet. While the Examiner attempts to find elements of Pinkerton that make up the binding band, he fails to point out specifically where Pinkerton discloses the preloading force and has made only a conclusory statement as to its presence … Pinkerton discloses a "housing with a cylindrical body 12 and annular end walls 14." Pinkereton, col. 8, lines 27-28. Pinkerton's "housing" is not a binding band, but a container disposed around the assembly to enclose it. This position is not only supported by the specification, but also by Figures 5, 7, and 8 which show that the housing 12 is completely separate from any magnets. Thus the housing cannot meet all the limitations of claim 1.". See **appellant's brief**, **pages 5-8** and **13-14**.

- Response – the examiner disagrees, and believes that claim 1 as written reads on **Pinkerton**. **Claim 1** specifically recites that "… an annular binding band surrounding, engaged with and exerting a preloading force…". **Claim 1** does not claim that the binding band is directly engaged with the magnet segments, **figs. 5** and **7** of **Pinkerton** shows that **elements 12** and **14** are securing the magnetic segments to be away from each other and preventing them from falling off, and that won't be achieved if a force is not exist **[it is an inherent feature]**. Additionally, for defining the binding band, the present application publication **US 2007/0090907 A1**, states in **paragraph 3** that "to prevent the annular permanent magnets of the stabilization bearing from expanding, as a result of the large centrifugal forces occurring at high rotation speeds, to such an extent that the fits existing between the magnets become lost and the magnets burst (or shift in the axial direction and detach from the hub), concentric binding bands made of high-strength non-magnetic material having a high tensile strength, preferably a carbon-fiber material with a high tangential preload, are mounted from outside onto the annular permanent magnets during assembly of the bearing elements." , **US 2007/0090907 A1** recites no further information about the preloading force type, except just mentioning a preloading force, instead the publication **US 2007/0090907 A1** provides the intended use of the preload force, as disclosed in **paragraph 9**, which recites that "the binding band preload needed to produce an immovable compressive contact between the enveloping surfaces of the individual permanent magnets", which also supports the examiner findings that a binding band read on the combination of elements 12, 14, 34, 38 and 40. Moreover,

one of the definition of the word binding is anything that binds or fastens, so the examiner believes that based on the broadest reasonable interpretation, the combination of elements 12, 14, 34, 38 and 40 anticipates the appellant's binding band. Furthermore, **Pinkerton** at **[c. 8, l. 42+]** describes that "… magnets 26, 28 and 29 which react with the loops are supported on the interior of the housing by segmental support pieces 30, 32 made of nonmagnetic material such as aluminum. Each magnet includes a ferromagnetic base 34, 35, 36 and two rare earth magnet pieces 38, 40, 42, 44 adhesively bonded thereto …", which is again supports the examiner findings about the preloading force. Additionally, in response to appellant's argument that element 12 is not resilient, the examiner find no recitation or support in **claim 1** claims that the binding band should be resilient or flexible.

2. Claims Rejections Under **35 U.S.C. § 102(b)** – as to **claims 3-5** and **9-11**, specifically appellant argues, "…Claim 3 requires that a permanent magnet be divided in a circumferential direction at multiple locations to form radially extending slits. These slits separate the magnet into a plurality of spaced apart segments, which are not in contact with adjacent segments. Pinkerton does not disclose a divided permanent magnet, but a plurality of individual magnetic elements…". See **appellant's brief**, **pages 8-10** and **14-15**.

- Response – the examiner disagrees, and respectfully asks the appellants to further view **claim 3**, **claim 3** requires magnetic segments, **Pinkerton** teaches permanent magnetic segments **[38 and 40]** as shown below **[reproduced and annotated fig. 7 of Pinkerton]**, **Pinkerton** anticipates the structure which required by **claim 3**, regardless of the process limitation that claims how to make these segments **[if all**

segments of element 38 or 40 are brought together, it will make one annular permanent magnet, because opposite poles will attract each other].

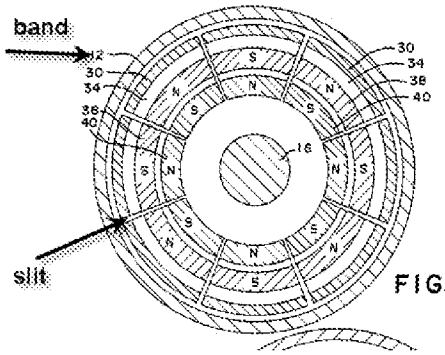

FIG. 7

3. Claims Rejections Under **35 U.S.C. § 102(b)** – as to **claims 6** and **12**, specifically appellant argues, "…Claim 6 requires that the radially extending slits of the concentric permanent magnets are radially offset from each other. This is shown in Figure 1, where the inner magnetic element has slits at 0, 90, I80, and 270 degrees, while the outer magnetic element has slits at 45, 135,225, and 315 degrees … Pinkerton does not disclose concentric magnets, but a plurality of individual horseshoe shape magnets. Also, the slits or divisions between each magnet in Pinkerton are shown aligned one another, not offset as required by the claim. Though the Examiner has attempted to interpret the "offset" limitation broadly, he makes only conclusory statements to elements and balancing without expressly setting forth how these limitations are met by Pinkerton. Moreover, though the limitations in a claim are to be given their broadest reasonable interpretation, this interpretation must be consistent with the specification ... the specification of the present application describes the term offset to mean "the locations at which the permanent magnets are divided are advantageously offset from another in the circumferential direction." Specification, page 3, lines 24-26. Thus, in light specification, the term offset should be interpreted as the slits of the magnetic are not aligned in the circumferential direction.

Regardless of the interpretation, however, Pinkerton neither teaches nor suggests such a limitation.". See **appellant's brief**, **pages 10-11** and **15**.

- Response – the examiner disagrees because claims 6 and 12 recites specifically that "... slit of **one** of the **multiple** permanent magnets is offset from the radially extending slot of another one of the multiple permanent magnets in the circumferential direction.", the features that the appellant recited in the arguments, specifically, the appellant argues that "… where the inner magnetic element has slits at 0, 90, I80, and 270 degrees, while the outer magnetic element has slits at 45, 135,225, and 315 degrees …" neither found or claimed in **claim 6** nor found or claimed in **claim 12**. The examiner believes that **Pinkerton** teaches the features of **claim 6**, these features are shown in **fig. 7 [see elements A, B and C and slit in the reproduced and annotated fig. 7 below]**, **Pinkerton** teaches a slit **[A]** of **one** of the **multiple** permanent magnets **[38]** is offset from the radially extending slot **[B]** of another one of the multiple permanent magnets **[40]** in the circumferential direction. Furthermore, the appellant argues that the specification of the present application describes the term offset to mean "the locations at which the permanent magnets are divided are advantageously offset from another in the circumferential direction." Specification, page 3, lines 24-26, which is what believed that reads on **fig. 7** of **Pinkerton** as shown below. Additionally, even if the examiner accepts the appellants arguments that the slits are aligned, claim 6 will still read on fig. 7 because that should means that the offset is zero, and the appellant claims no specific angle for the claimed offset.

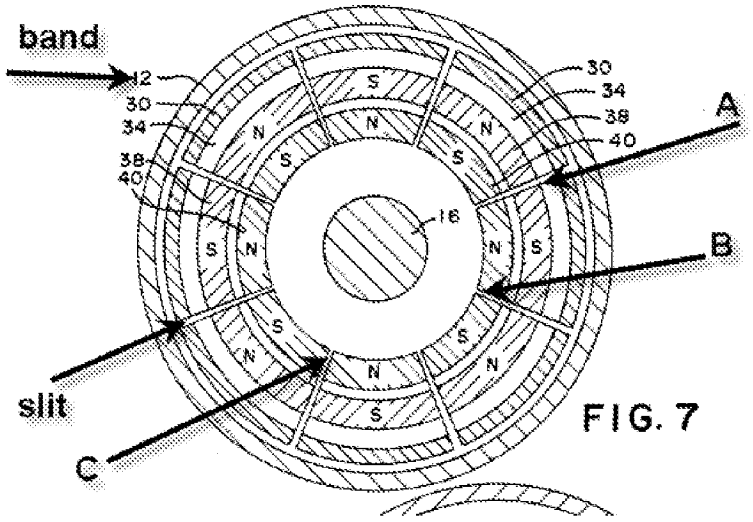

FIG. 7

4. Claims Rejections Under **35 U.S.C. § 102(b)** – as to **claims 7** and **13**, specifically appellant argues, "… Koenig makes no mention of a binding band. The inserts disclosed in Koenig are not binding bands, and because Pinkerton also fails to disclose a binding band as set forth above, a combination of these two references fails to disclose a binding band as required by the claims … the use of carbon-fiber material as set forth in claim 7, however, takes advantage of the material properties of carbon-fiber for an intended use not disclosed in the cited references or known by those skilled in the art prior to the filing of this application. The carbon-fiber material is used by Appellant for its high tensile strength and its ability to exert a preloading force on the magnet. This intended use is neither taught nor suggested by the cited references, making the Examiner's design choice rejection improper.". See **appellant's brief**, **pages 12-13** and **15**.

- Response – the examiner disagrees, because the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See In re

Keller, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). Moreover, in response to appellant's argument that there is no teaching, suggestion, or motivation to combine the references, the examiner recognizes that obviousness may be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988), In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992), and KSR International Co. v. Teleflex, Inc., 550 U.S. 398, 82 USPQ2d 1385 (2007). In this case, **Pinkerton** failed to teach the material as required by **claim 7**, while **Koenig** teaches this material, specifically, **column 6**, **lines 1-10** teaches that solid bearing insert 36, which preferably protrudes slightly above the circumferential **outer surface of the bearing cylinder [this material is known to be used on the outer surface, see figures 2-3]**, thereby providing a plurality of outer bearing surfaces on the bearing cylinder. Preferably, the solid, abrasion resistant, self-lubricating material is a reinforced carbon-fiber filled polyamide resin material such as Aurum, commercially available from Mitsui Toatsu Chemicals, Inc. as JCN 3030. Further more in response to appellant's argument that "… takes advantage of the material properties of carbon-fiber for an intended use not disclosed in the cited references … the carbon-fiber material is used by Appellant for its high tensile strength and its ability to exert a preloading force on the magnet. This intended use is neither taught nor suggested by the cited references", a recitation of the intended use of the claimed invention must

result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Mohamad Musleh/

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